UNITED NATIONS

TD

United Nations Conference on Trade and Development

Distr.
GENERAL

TD/B/41(2)/6
13 January 1995

Original: ENGLISH

TRADE AND DEVELOPMENT BOARD
Forty-first session
Second Part
Geneva, 20 March 1994
Item 5 (a) of the provisional agenda

UNCTAD'S CONTRIBUTION TO THE IMPLEMENTATION OF THE UNITED NATIONS NEW AGENDA FOR THE DEVELOPMENT OF AFRICA IN THE 1990s

Sustainable development, population, human resources, environment

Report by the UNCTAD secretariat

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Chapter I

THE INTERRELATIONSHIP BETWEEN POPULATION, ENVIRONMENT, HUMAN RESOURCES, ECONOMIC GROWTH AND SUSTAINABLE DEVELOPMENT

A. International initiatives on environment and population

1. It has long been realized that sustainable development requires that developing countries come to grips with the interrelated issues of fast population growth, resources, environment and development. The Mexico City Conference 1/ dealing with these issues urged governments to adopt and implement specific policies, including population policies, that would contribute to redressing imbalances between trends in population growth and resources and environmental requirements and promote improved methods of identifying, extracting, renewing and conserving natural resources. The Bruntland Commission 2/ enhanced awareness and acceptance of the fact that rapidly growing populations could increase the pressure on resources and slow any rise in living standards. It is thus clear that a prerequisite of sustainable development is keeping population size and growth in harmony with the changing productive potential of the ecosystem.

2. In 1989, the International Forum on Population in the Twenty-first Century 3/ adopted the Amsterdam Declaration on a Better Life for Future Generations, which acknowledged, inter alia, that population, resources and the environment were inextricably linked and stressed the commitment of the Forum's participants to bringing about a sustainable relationship between human numbers, resources and development. In 1990, the report of the South Commission 4/ acknowledged that, in several developing countries, the pressure of growing numbers on the limited fertile land was accelerating the degradation of land and water resources and causing excessive deforestation. The Commission found that present trends in population, if not moderated, had frightening implications for the ability of the South to meet the twin challenges of development and environmental security in the twenty-first century. Agenda 21 5/ adopted in 1992 by the United Nations Conference on Environment and Development, recognizes that demographic trends and factors and sustainable development have a synergistic relationship, and reiterates the view that the growth of world population and production combined with unsustainable consumption patterns places increasingly severe stress on the life-supporting capacities of the planet. Agenda 21 calls for developing and disseminating knowledge concerning the links between demographic trends and factors and sustainable development and, on this basis, for formulating integrated national policies and local programmes for population, the environment and development.

B. UNCTAD and sustainable development

3. The Final Act of UNCTAD VII stated that "close interlinkages had become apparent between the economy, population and the natural environment. 6/ The Final Act attributed the degradation of the environment to persistent poverty being further worsened by the financial pressures on developing countries, which had led to the over-exploitation of natural resources and reductions in environmental programmes. 7/ The Final Act recognized that

such degradation could be halted and reversed only by ecologically sustainable growth and by integrating environmental factors in development programmes".

4. UNCTAD's work on sustainable development has been predicated on the assumption that sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own. Our Common Future 8/ states that meeting essential needs depends in part on achieving full growth potential, and sustainable development clearly requires economic growth in places where such needs are not being met. Mass poverty is often at the root of environmental degradation, its elimination is essential for sustained environmental improvement.

5. It is also recognized that there is a link between international action to bring about stable and equitable commodity prices and appropriate national environmental practices in producing countries. General Assembly resolution 42/186 9/ stated that long-term declines in commodity prices, coupled with their instability, have adversely affected environmental management of natural resources.

6. General Assembly resolution 42/187, concurring with the World Commission stated that the critical objectives for environment and development policies which follow from the need for sustainable development must include preserving peace, reviving growth and changing its quality, remedying the problems of poverty and the satisfaction of human needs, addressing the problems of population growth and of conserving and enhancing the resource base, reorienting technology and managing risk, and merging environment and economics in decision-making.

7. Among these issues, those most relevant to UNCTAD are: changing the quality of growth, conserving and enhancing the resource base, reorienting technology, managing risk and merging environment and economics in decision-making; as well as addressing the problems of long-term declines in commodity prices, their instability and their adverse impact on environmental management.

8. Accordingly, UNCTAD's work on sustainable development involves, inter alia, the following:

(i) the interlinkages of trade and environment and methods for the internalization of environmental costs into prices of all products;

(ii) economic and regulatory tools to correct market deficiencies without hampering economic growth and development or jeopardizing competitive positions on international markets;

(iii) market-based instruments for financing environmental protection;

(iv) the implications for developing countries of basic principles designed to foster economic behaviour more in line with the imperatives of sustainable development;

(v) the linkages between poverty alleviation and sustainable development;

(vi) ways and means of promoting sustainable development at the national level, ensuring positive linkages between technological, sectoral and macroeconomic policies.

C. Sustainable development in the African context

9. As the world's poorest region, beset with many ecological problems, Africa faces a tough battle in blending environmental and development concerns, as recommended for example by the United Nations Conference on Environment and Development (UNCED). Translating the concept of sustainable development that requires that economic growth should be pursued only in a manner that is socially, economically and environmentally viable in the long term will be very difficult for Africa. 10/ Unlike some other parts of the world where industrial pollution, acid rain or ozone depletion may be of foremost concern, African countries are preoccupied overwhelmingly with soil erosion, desertification, loss of trees, uncertain rainfall and a wide range of problems related to extreme poverty. Trading off short-term economic gain against future environmental preservation will, therefore, be difficult to achieve in Africa.

10. Many of the environmental and development indicators for Africa point towards a continuing downward spiral. And this being the poorest continent in material terms, any trade-off between survival strategies and long-term sustainability puts the livelihoods, if not the lives, of tens of millions of people at risk. The task of balancing immediate needs against those of future generations is one for which there is no objective moral yardstick.

11. It is instructive to look at the salient, measurable symptoms of Africa's present situation in order to determine what "sustainable development" may mean for Africa and what measures have the best hopes of making it reality:

- Africa has the largest number of the poorest countries in the world: 32 of the 47 countries classified by the United Nations as "least developed";

- Africa is the only continent where economic production per person declined consistently throughout the 1980s;

- Africa's agriculture depends on basic technology;

- African industry is overly dependent on imports of capital, skilled labour, technology and spare parts; and

- The continent contains many small States with very small populations and markets.

12. To these drawbacks can be added very low levels of productivity, a threatened collapse of the social fabric in respect of education, health, shelter and perennial problems such as unemployment and natural catastrophes and drought. There are also crises caused by an unfavourable world economic environment, by systems of government that have marginalized the people and by inadequacies of economic management. Indebtedness has risen steadily over the past decade, while food production per person has fallen by about 10 per cent.

13. Table 1 shows some environment and development indicators in Africa. As can be seen from the fourth column, most African countries registered falling food production per capita in the 1980s. In the majority of countries more than half the population has no access to safe water. In the Central African Republic, for example, only 12 per cent of the population has access to safe water. Other countries with low percentages of the population having access to safe water include: Angola (35), Burundi (38), Cameroon (32), Congo (38), Côte d' Ivoire (18), Ethiopia (19), Guinea (32), Guinea-Bissau (25), Kenya (30), Madagascar (22), Mali (38), Mozambique (24), Somalia (37), Sudan (21), Uganda (20) and Zaire (34). Water supply and sanitation are still major problems with millions of Africans not having access to safe drinking water and satisfactory sanitation.

14. Given the expected future growth of the population, it is expected that by the year 2000 there could still be well over a billion people without adequate water supplies and more than double that without sanitation, chiefly in Africa and Asia. 11/ Millions of people are affected by water-related diseases in one form or another - notably schistosomiasis, hook-worm, diarrhoea, which has a strong relationship to clean water supplies and sanitation facilities, is estimated to cause about five million infant deaths per annum in developing countries. For example in Algeria, where the relationship between water-related diseases and the degradation of water supplies is well documented, about one third of all infant deaths are attributed to diarrhoea. 12/ (Algeria has a relatively high access to clean water (77 per cent) compared to most African countries.) In fact in the areas most affected by worsening water supplies, water-related diseases account for about three quarters of all reported illness.

15. The Programme of Action for the Least Developed Countries for the 1990s recognized that the high rate of population growth in LDCs, including the 32 African LDCs, is a fundamental problem adversely affecting their efforts to alleviate poverty, the allocation of economic resources and the quality of the natural environment. The LDCs were urged to intensify their efforts to achieve, as appropriate, population growth rates which strike an optimal balance in the interrelation between their population, their natural resource base and the environment, taking into account traditions and values, as well as economic imperatives.

16. There is a need for thorough analytical work in each country in which specific plans of action need to be anchored. These are likely to involve and/or point to the need for promotion of alternative livelihoods and improvement of national economic environments with a view to strengthening programmes aimed at the eradication of poverty and at ensuring food security, demographic dynamics, sustainable management of natural resources, sustainable agricultural practices, development and efficient use of various energy sources, institutional and legal frameworks, strengthening of capabilities for assessment and systematic observation, including hydrological and meteorological services, and capacity building, education and public awareness.

Table 1

Africa: environment and development indicators

	GNP per capita 1990* ($)	Population 1990 (mm)	Cultivated land per capita, 1990 (ha)	Food prod. per capita 1986-89 (1979-81=100)	Access to safe water 1988-90 (% of pop.)	Traditional fuel, 1989 (as % of total energy use)	Annual average deforestation rate 1981-85	Total forest lost (%)
Algeria	2 058	24.96	0.30	99	71	3	2.3	n.a.
Angola	609	10.2	0.38	85	35	55	0.2	45
Benin	362	4.63	0.40	114	54	86	1.7	59
Botswana	2 049	1.30	1.06	68	53	n.a.	0.1	62
Burkina Faso	328	8.99	0.40	116	69	92	1.7	80
Burundi	211	5.47	0.59	98	38	92	2.7	88
Cameroon	941	11.83	0.59	96	32	49	0.4	59
Cape Verde	894	0.37	0.11	84	71	0	n.a.	n.a.
Central African Republic	393	3.03	0.66	90	12	86	0.2	55
Chad	189	5.67	0.56	101	n.a.	92	0.6	80
Comoros	482	0.55	0.18	121	n.a.	0	n.a.	n.a.
Congo	1 007	2.27	0.07	97	38	41	0.1	49
Côte d'Ivoire	729	11.99	0.31	95	18	59	5.2	78
Djibouti	n.a.	0.40	0.00	n.a.	47	0	n.a.	0
Egypt	603	52.42	0.05	108	89	4	n.a.	n.a.
Equatorial Guinea	325	0.35	0.65	n.a.	n.a.	75	0.2	50
Ethiopia	118	49.42	0.28	90	19	91	0.3	86
Gabon	3 234	1.17	0.39	81	68	35	0.1	35

Table 1 (continued)

	GNP per capita 1990*	Population 1990 (mm)	Cultivated land per capita, 1990 (ha)	Food prod. per capita 1986-89 (1979-81=100)	Access to safe water 1988-90 (% of pop.)	Traditional fuel, 1989 (as % of total energy use)	Annual average deforestation rate 1981-85	Total forest lost (%)
Gambia	260	0.86	0.21	94	77	77	2.4	91
Ghana	392	15.02	0.16	108	57	67	0.8	80
Guinea	428	5.75	0.13	90	32	73	0.8	69
Guinea-Bissau	179	0.96	0.35	108	25	67	2.7	80
Kenya	368	24.03	0.10	102	30	79	1.7	71
Lesotho	470	1.77	0.18	79	48	n.a.	n.a.	67
Liberia	n.a.	2.57	0.14	95	55	78	2.3	87
Libyan Arab Jamahiriya	5 315	4.54	0.47	107	94	1	n.a.	n.a.
Madagascar	233	12.00	0.26	93	22	82	1.2	75
Malawi	195	8.75	0.28	85	56	90	3.5	56
Mali	271	9.21	0.23	97	38	87	0.5	78
Mauritania	501	2.02	0.10	88	66	0	2.4	90
Mauritius	2 263	1.08	0.10	101	95	52	3.3	n.a.
Morocco	948	25.06	0.37	122	61	5	0.4	n.a.
Mozambique	77	15.65	0.20	84	24	89	0.8	57
Namibia	1 029	1.78	0.40	92	n.a.	n.a.	0.2	n.a.
Niger	308	7.73	0.47	86	n.a.	73	2.6	80
Nigeria	266	88.50	0.29	98	48	62	2.7	76
Rwanda	311	7.23	0.16	78	64	88	2.2	80
Sao Tome & Principe	393	0.12	n.a.	85	n.a.	n.a.	n.a.	n.a.

Table 1 (continued)

	GNP per capita 1990* ($)	Population 1990 (mm)	Cultivated land per capita, 1990 (ha)	Food prod. per capita 1986-89 (1979-81=100)	Access to safe water 1988-90 (% of pop.)	Traditional fuel, 1989 (as % of total energy use)	Annual average deforestation rate 1981-85	Total forest lost (%)
Senegal	708	7.32	0.71	106	54	51	0.55	82
Seychelles	4 541	0.07	n.a.	n.a.	100	n.a.	n.a.	n.a.
Sierra Leone	237	4.15	0.43	90	42	76	0.3	88
Somalia	n.a.	7.49	0.14	97	37	85	0.1	67
Sudan	374	25.20	0.50	88	21	81	1.1	74
Swaziland	816	0.78	0.21	99	53	n.a.	n.a.	56
Tanzania	129	27.31	0.19	89	56	90	0.3	40
Togo	405	3.53	0.41	89	71	43	0.7	65
Tunisia	1 419	8.18	0.57	96	68	15	1.7	n.a.
Uganda	276	18.79	0.36	86	20	67	0.8	79
Zaire	228	35.56	0.22	95	34	76	0.2	57
Zambia	418	8.45	0.62	96	59	58	0.2	30
Zimbabwe	644	9.70	0.29	94	n.a.	25	0.4	56

Source: United Nations Africa Recovery adapted from UNDP/World Bank African Development Indicators, United Nations World Population Chart, 1990, World Resources, 1992-93, FAO.

Production Year Book, 1989. UNDP, Human Development Report, 1992.

17. While trading-off short-term economic gain against future environmental preservation looks extremely difficult in the African setting, it might be possible to identify actions and/or strategies that can be pursued to minimize this dilemma. This document emphasizes the need for African Governments and the international community to pursue policies that adequately address people's needs, including the necessary institutional reforms that will bring about behavioural patterns conducive to environmental preservation. The document addresses the cross-cutting nature of the linkages amongst population, environment and development. For the purposes of combating environmental degradation in Africa top priority should be given to (a) implementation of appropriate, effective measures to reduce the rate of population growth in Africa; and (b) effective measures to reduce poverty. As the Human Development Report, 1991 put it: "environmental degradation is usually caused by poverty in the South - and by affluence in the North". In the South even in the absence of growth actions are needed in order to prevent environmental degradation resulting from population growth. As the World Banks Development Report 1992 points out, the environmental problems that countries face vary with their stage of development, the structure of their economies, and their environmental policies. Some problems are associated with the lack of economic development: inadequate sanitation and clean water, indoor air pollution from biomass burning, and many types of land degradation in developing countries have poverty as their root cause. Under such circumstances, the challenge is to accelerate equitable income growth and promote access to the necessary resources and technologies. There are many problems, however, that are exacerbated by the growth of economic activity. Industrial and energy-related pollution (local and global), deforestation and overuse of water are the result of economic expansion that fails to take account of the value of the environment. With or without growth, population growth may make it more difficult to address environmental problems.

18. A sustainable approach to development and natural resource management must take into account the fact that some environmental problems, which in the first instance appear in the form of environmental resource depletion of one kind or another, may have their ultimate causes in developmental processes which are far removed from the immediate environmental issues. In such cases, the objective of environmental policy should be the removal of these ultimate causes rather than the adaptive or corrective type of policy aimed at repairing the environmental damage or at alleviating its effects.

19. Accordingly, in the African context, the main problems that need to be addressed include: inadequate man-made capital, stagnant and often rudimentary technology, lack of employment opportunities (particularly off-farm), inability to cater for basic human needs, combined with a growing population. In addition there are external constraints relating to debt, trade, aid and technology choice. These problems force an African economy into a state where survival necessitates eating into the natural or environmental capital stock. Project assistance which is directed solely towards repairing the environment or replenishing the natural capital stock, to the disregard of the broader developmental issues, may turn out to be ineffective under such circumstances. Rebuilding the stock of man-made capital and employment generation - particularly for the low-skilled majority, even in areas or sectors far removed from the immediate environment, may be a more effective means of environmental preservation and thus ensuring, at least, ecological sustainability.

Chapter II

POPULATION AND DEVELOPMENT IN AFRICA

A. General population issues and the New Agenda

20. Sustained economic growth remains a desperately important imperative in developing countries. Without the benefits of such growth, developing countries will not be able to improve the standards of living of their people and a durable solution to demographic issues will be seriously hampered. The level of population relative to the resource base, and the high rates of growth of population in the third world, are considered to be among the fundamental causes of both poverty and environmental degradation. In the New Agenda for the development of Africa in the 1990s Africa committed itself to "deliberate and systematic integration of population factors into the development process in order, inter alia, to contain the tremendous strain and stress that a rapid rate of population growth puts on development". 13/ Accordingly, African countries were to devise and implement national population policies, in all their interrelated aspects, including a reduction in maternal and child mortality and provisions for family planning and female education and achievement of substantial and sustained increases in the quality of life and standard of living of the entire population.

21. The 1994 International Conference on Population and Development 14/ adopted a Programme of Action which builds on the international consensus that has developed since the Bucharest Conference to consider the issues of population, sustained economic growth and sustainable development, and advances in the educational and economic status of women. In order to reflect the growing awareness of the interlinkages among population issues, sustained economic growth and development, the Conference had a broader mandate than previous population conferences. The Programme of Action commits the international community to quantitative goals in three areas that are mutually supporting and of critical importance to the achievement of other important population and development objectives. These areas are: education, especially for girls; infant, child and maternal mortality reduction; and the provision of universal access to family planning and reproductive health services.

22. The basis, for an effective solution of population problems is, above all, socio-economic transformation. In this regard, the International Conference on Population and Development made a number of recommendations dealing with socio-economic policies, and mentions specifically some issues, for example, development assistance, economic growth, food and agriculture, education, health and employment, with the understanding that such socio-economic transformation would modify demographic variables by creating new conditions.

23. Slow growth of per capita output in Africa, at an average annual rate of 0.4 per cent between 1974 and 1984, gave way to an outright decline of 0.6 per cent after 1984. 15/ Income per head steadily declined by about 2.6. per cent per annum, for example, between 1988 and 1993 and was about 4 per cent below its 1970 levels. 16/ This sharp decline in the standard of living of the people in Africa severely affected and continues to affect

all groups of the population such that about half of the people in Sub-Saharan Africa live below the poverty line with a good proportion of those dependent on external assistance for their survival.

24. Poverty is usually coexistent with illiteracy, unemployment, malnutrition, poor health, low status of women and deteriorating environmental conditions. Such situations are also often accompanied by high levels of fertility, morbidity and mortality. In these particular cases, extensive poverty aggravates the negative impacts of population pressure on land use and, in turn, constitutes a major obstacle to obtaining fertility and mortality declines in rural areas. There is increasing evidence that the resolution of demographic issues is to be found in addressing simultaneously these interrelated factors: income distribution; improvement in the status of women; gender equality; basic education; primary health care (including family planning); and employment opportunities. 17/

B. Population issues in the African context

25. Over the past three decades, population issues in Africa have been characterized by high fertility rates, high but moderately declining mortality rates - particularly during infancy and early childhood - resulting in accelerating rates of population growth, young age structure and high dependency ratio, uneven spatial distribution of population, increasing urbanization, massive unemployment, diminishing practice of traditional methods of birth control and low usage of modern methods of contraception, low educational levels, high proportion of unskilled workers in the labour force, and the low status of women. Unfortunately, until recently, many African countries believed that economic development could be achieved concurrently with rapid growth in population. Even those who acknowledged that rapid population growth rates retarded the fulfilment of their development objectives did not take any concrete steps to address their population issues.

26. A number of factors account for African countries' earlier reluctance to address population issues. Chief among which are the lack of relevant demographic data, the lack of awareness of the importance of population to development and the inadequate national capabilities to analyse and utilize population data in development planning.

27. The population of Sub-Saharan Africa is now about 526 million. The rate of growth is 3.25 per cent per year. At that rate, the population will double, reaching nearly 1.378 billion persons in about 20 years time. Even North Africa is growing at 2.92 per cent per annum which is much higher than the 2.02 per cent per annum for southern Asian countries for instance.

28. The time has come for most SSA countries to do what all countries must do at some time: to consider at what point its continued population growth must stop in order to have a standard of living and quality of life appropriate for the people of the country.

(a) Impact of population growth on African development

29. Population growth is only one factor to be considered in the development of a country; none the less it is a critical one. The purpose of economic

development is not simply to increase the total goods and services produced - the Gross National Product (GNP) - but to increase the standard of living and the quality of life for the individual, including the amount of goods and services available per person. GNP per capita can be raised by increasing the production of goods and services, by slowing the increase of the population or, most effectively, by doing both. Development effort is likely to be more successful where attention is also given to slowing population growth.

30. Continued poverty, large-scale unemployment, underemployment and disguised unemployment are patent symptoms of the excessive absolute pressure of population on the economic and ecological bases of African countries. Periodic shortages of food leading to near famine conditions and the chronic hunger and malnutrition of large segments of their peoples is another symptom of excessive population pressures. 18/ Food is the most dramatic indicator. Unfortunately, focusing on food, has often led to less attention to other problems that high population growth rates cause. These include clean water and air, social and physical infrastructural facilities such as: hospitals, schools, roads, means of communication and transportation etc. Forty-one SSA countries are among the 54 countries with the lowest Human Development Index. 19/

31. The precarious demographic situation in Africa and its adverse impact on development has been further worsened by the persistent conflicts and civil wars which have plagued the continent in recent years. The ravages and economic disorganization caused by these events have led, in several countries, to the suspension of agricultural activities causing famine. More than 8 million people have been forced to seek asylum outside their countries and about 20 million are internally displaced in their own countries, thus deprived of their traditional means of living and made to depend on external assistance and lacking education and health services.

32. It needs to be pointed out that a synergy exists between the sheer speed of population growth, on the one hand, and inappropriate government policies. In Africa food supplies, for example, are inadequate partly because of a pervasive urban bias that leaves farmers with a few incentives to produce. In some cases, significant resources that could be invested in education, for instance, are diverted for military use. In few of those countries is rapid population growth the main contributing factor retarding economic growth. But in most, such growth has exacerbated the negative effects of short-sighted policies and it will likely do so to a greater degree in future.

33. Increasingly evidence shows that the future will pose far greater challenges to the human race if rates of population growth are not slowed further. A growing number of scientists now warn that, without global efforts to slow population growth, science and technology may not be able to redeem the future from want and hunger. Recently, in 1992, the United States National Academy of Sciences and the Royal Academy of London predicted that if current population and consumption trends continue, "Sciences and technology may not be able to prevent either irreversible degradation of the environment or continued poverty for much of the World. 20/

34. The following generalization about the impact of high population growth rates apply to most African countries:

(1) Rapid population growth slows development by exacerbating the choice between higher consumption now and larger investment towards future benefits for many;

(2) Rapid population growth further exacerbates the disparities between rich and poor; and threatens the balance between people and scarce natural resources;

(3) It leads to increased land values, more fragmentation of property, higher rents, and lower wages; and those who already own land and capital grow richer, while the poor get poorer;

(4) The absolute and relative rate of saving in the economy will be reduced;

(5) High population growth generally inhibits efforts to more equitably distribute resources, because it is difficult to improve the lot of the poor while trying to cope with a heavy rise in the total population; the dependency burden imposed on the existing work force will be increased;

(6) It will make the task of feeding its own people, conserving soils, restoring forests and woodlands, and enhancing subsistence agriculture more difficult for Africa;

(7) And finally, high population increase has a major impact on various other aspects of economic development in Africa: population growth as it affects urbanization, labour force growth, and the number of dependants workers must support and displaced persons and refugees and social upheavals. In the 1980s for the continent as a whole more resources went to waging conflicts, civil wars and internal strifes than to education and health.

(b) Population growth and its impact on selected key sectors and areas

(i) Food and agriculture

35. African countries are characterized by a high share of agriculture in economic activity and the labour force. This situation exposes the economy as a whole to shocks and strain when agriculture is affected by the vagaries of weather, civil strife or diseases. In addition population growth rates that outstrip growth in production lead to declining per capita agricultural output. Pressure on arable, and increasingly marginal, land due to demographic pressures, leads to loss of productivity and environmental degradation.

36. The increased demand for food caused by the high growth rates of population is one of the critical problems faced by African countries. During the 1980s, per capita food production continued to grow at the global level. Sub-Saharan Africa, however, continued on its long-term path to decline (minus 0.5 per cent per annum). The overall incidence of undernutrition declined significantly in relative terms but only slightly in absolute terms in the developing countries as a group. However, the incidence of undernutrition increased in both absolute and relative terms in Sub-Saharan Africa. At the global level, the Food and Agriculture Organization of the

United Nations (FAO) estimates that the daily calorie supply per capita increased from 2,383 in 1965 to 2,700 in the period 1988-1990. 21/ In Sub-Saharan Africa there was a decline from 2,120 to 2,100.

37. Reports of "harvest deficits" in Africa are frequent. The fact is, in most cases total food production may have increased. Two points need to be noted. First, food per capita production does not increase because of high population growth rate coupled with low productivity. Food production per capita is now 20 per cent below 1970 levels. Secondly, food production increase may come from the addition of marginal land gained by the destruction of forests or cultivating hillsides. This further undermines the continent's capacity to provide food for itself. The tragic fact is that presently Sub-Saharan Africa does not provide its own food requirements and the prospect for the future, with high fertility continued, is bleak.

(ii) Education

38. According to a World Bank Report, 22/ by the year 2000 Africa's primary and secondary school age population is likely to reach 220 million, which is 90 million, or 70 per cent more than the number in 1984. The required investments in the construction of schools and recurrent expenditures to accommodate this enormous increase in the potential demand for educational services for primary and secondary education, was estimated at about $11 billion annually by the year 2000 (assuming that per pupil expenditure will remain at their 1983 levels in constant dollar terms). This is about $2 billion more than the total spent on all aspects of education in 1983. Thus the rapid demographic increase requires massive efforts just to stay even in terms of enrolment ratios. Calculations for several countries have shown that the savings in school costs compared to the costs of family planning programmes was in the order of 7 or 9 to 1.

39. In addition to the above, it should be noted that as populations grow, the number of school age children increases more rapidly than the number of working adults, the burden of supporting an expanded educational system falls on an adult population that is decreasing as a proportion of the overall population.

(iii) Health

40. The main implication for health in relation to population, particularly in Sub-Saharan Africa, is that further health improvements beyond current levels are constrained by rapid population increase. In most African countries, health institutions and family planning delivery points are still plagued by inadequate medical personnel, service delivery points and financial limitations. Even for a relatively richer country such as Kenya, ratios of one doctor for every 10,000 persons and of one nurse for every 2,500 persons are common. These ratios could deteriorate, under the prevailing rates of population increase. In most African countries, the health care system has an urban, curative bias, which means that the majority of the population receive very unsatisfactory access to services, and that preventive health care is relatively neglected. Furthermore, coordination is weak between health services and other activities impinging on health levels, such as agriculture, water development, education and social services. For example, the lack of

access to food has affected a large number of people. These people suffer from micronutrient deficiencies which can lead to blindness, mental retardation and death. Thirty million people in Africa (including a large proportion of children under five years of age) suffer from protein-energy malnutrition.

41. A new dimension compounding the health problems in Africa and further aggravating the impact of population growth is the AIDS problem. At the end of 1993, two thirds of all HIV carriers worldwide were estimated to be in SSA. About 50 per cent of the total population in this region is in the high-risk and economically productive age of 15 to 45 years of age. This has a number of socio-economic and demographic ramifications. Thus the rapid spread of AIDS could impair the labour force for years to come, with serious implications for socio-economic planning, capacity building and the development process in general. It is estimated that GDP growth rate in SSA will be halved in the next five years through deaths from AIDS. 23/

(iv) Employment

42. The most fundamental and difficult task of most developing countries is to find real jobs for young people growing up into the job market. The challenge of creating sufficient employment opportunities in the modern sector of their economies is made increasingly more difficult over the years as larger cohorts of young people grow into the job market every year. Although a certain number may be absorbed through formal and informal sector activities, massive unemployment is a certainty for the bulk of these young people. For the vast numbers left to unemployment or underemployment this represents personal tragedies. It is now posing serious social and economic threats for many African countries and, if present high fertility continues, will get much worse.

43. The labour force in Africa is projected to grow by about 3 per cent per annum during the 1990s which considerably exceeds the annual rate of increase of the modern sector of the economy. Even if a slow-down in population growth takes place, it will affect the growth of the labour force only after a time lag. Thus, the labour force in Africa will continue to increase substantially in the medium term. African countries as they have committed themselves in the UN-NADAF, would need to vigorously pursue the implementation of policies for the transformation of the structure of their economies in order to achieve growth and development on a sustained and sustainable basis, absorb the new entrants into the labour force and reduce the existing levels of unemployment and underemployment.

(v) Population and poverty alleviation

44. Population factors alone do not produce poverty. However, rapid population growth, great density (particularly in relation to agricultural land), burdensome age structure, and other sectors maintain poverty and make it more difficult to escape. Children in poverty suffer most, with poor nutrition, lack of clean water, and many other conditions affected by population factors. These conditions impair their bodily and mental growth.

45. As is typical in countries where fertility has been high for a long period of time, most African countries have young populations. Approximately 50 per cent of the population is under the age of 15. Consequently, Africa has a very high child dependency ratio (proportion of children under 15 to adults in the economically productive age, 15 to 64). For every 100 adults, there are about 99 children to be supported and educated, or one adult for each dependent child. By contrast, an industrialized country typically has two or three adults in the economically productive ages for each dependent child.

46. The general population and the poor, in particular, need resources in order to undertake various economic activities to support themselves, or invest in assets so as to ensure higher streams of incomes for themselves or their progeny. Household expenditure on food, medicines, education, shelter, and so on, for their children, is just as much "development expenditure" as Governments doing so. High fertility levels ensures that household savings, and a disproportionate share of public and private resources are devoted to the needs of the young. This leaves little room to invest in assets and ensure higher streams of incomes. Hence, a significant reduction in the child dependency ratio could release substantial sums for investment in other development programmes.

47. The rapid population growth and the pronounced imbalances in its distribution further aggravate the already widely prevalent poverty conditions in several African countries. The high rates of population growth have a negative impact in that it depresses per capita incomes and further exacerbates shortages in basic social and economic services, such as education, health, infrastructure and employment which are important elements in the poverty alleviation strategies.

(c) Future actions on population in Africa

48. The country presentations submitted by African countries to the 1994 International Conference on Population and Development, besides confirming that population policies and programmes can contribute significantly to socio-economic development, provide extensive observations and experiences on the interrelationships between population, development and environment at both the macro and micro levels. The Declaration on Population and Development in Africa adopted by the Assembly of Heads of State and Government in Tunis, Tunisia, in June 1994 states that "We are aware of the intricate inter-play between population, environment and sustainable development and are mindful of the necessity for African States to evolve population policies and programmes to bring a balance between population growth and the capacity of our countries to provide for the basic needs of our people". 24/

49. In the absence of stronger commitments, both at the national and international level, to implement the population policies in African countries, the high population growth rates will continue to put tremendous pressure on these countries' development efforts. It is imperative to increase the level of public spending as well as that of development aid on basic social services. In the UN-NADAF the international community entered into a new and stronger accord with Africa, spelling out clearly the firm commitment of the international community to support and assist Africa in its

efforts to implement successfully its development agenda. The Secretary-General of the United Nations estimated that a minimum of $30 billion in ODA was required for Africa in 1992, after which the real net ODA would need to grow at an average rate of 4 per cent per annum. The international community undertook to pursue its efforts to provide additional resource flows to Africa which will complement domestic efforts and financial resources, bearing in mind these targets. It also reaffirmed its commitment to work in order to attain the accepted United Nations targets of devoting 0.7 per cent of GNP to ODA as well as the agreed targets established by the Second United Nations Conference on the Least Developed Countries.

50. In this context and according to estimates by OAU and ECA, the additional expenditure for the implementation of the Programme of Action adopted by the 1994 International Conference on Population and Development is about $2.3 to $3 billion annually (in constant 1993 prices) during the period 1995-1999, $2.9 to $3.8 billion during the period 2000-2004, $3.5 to $4.6 billion during the period 2005-2009 and $4.3 to $5.6 billion annually during the period 2010-2015. African countries, with their present economic difficulties, are hardly expected to provide these amounts. The full and expeditious implementation by the international community of the above-mentioned commitments is essential if the present precarious situation in several African countries is not to deteriorate even further.

51. The majority of the African countries now accept that their population growth rates are too high and have modified their positions on the demographic situation. Thus, Governments of countries constituting 81 per cent of the African population have policies to decrease the present rate of fertility. 25/ In fact eight African countries (Botswana, Cameroon, Côte d'Ivoire, Egypt, Ghana, Mauritius, Morocco and Seychelles) were among 40 developing countries which, according to UNFPA, have made outstanding achievements in reducing key mortality and fertility indicators (outstanding defined as reduction by one half or more between the 1970s and 1990s).

52. African Governments need to pursue the full and effective implementation of these commitments through provision of financial, managerial and technical support for placing population programmes, and family planning in particular, firmly on the social agenda. They need to follow up the adoption of national population policies by the designing of comprehensive or sectoral programmes for the implementation of these policies. This requires the effective coordination of population activities at the national level and collaboration and strong operational linkages among government departments and institutions in the population and development sectors. The scope and coverage of governmental involvement in the dissemination of information on population issues and particularly family planning need to be expanded. Population concerns, other than population growth and fertility, also need to be adequately addressed.

53. It must be emphasized that it is only recently that attitudes towards population growth have begun to change so that a smaller population size is now being encouraged by a number of African countries. However, these efforts continue to be hampered by financial and logistical obstacles as well as the scarcity of qualified personnel particularly in African LDCs. As noted in the 1993-1994 Least Developed Countries Report, the financial difficulties faced

by these countries have constrained family planning programmes and related population activities and exacerbated the difficulties of creating an environment favourable to fertility decline. 26/ The Report recommended that spending on population programmes will have to increase simply to keep up with population growth. At a minimum it should be an increasing proportion of both government budgets and aid programmes. It emphasized that the funding of population policies must be sustained and insulated from short-term budgetary pressures if such activities are to be effective.

Chapter III

ENVIRONMENT AND DEVELOPMENT

A. The African Governments' perspective on environmental issues

54. It is now generally accepted that, without adequate environmental protection, development will be undermined; and, without development, environmental protection will fail. According to the New Agenda for the Development of Africa in the 1990s, Africa is fully committed to the promotion of sustainable development at all levels of socio-economic activity, through, inter alia, the Bamako Convention (banning the import of toxic waste to Africa), the Plan of Action to combat Desertification and commitment to the principles enshrined in Agenda 21. Africa's stance is that "the problems of environment and development should be tackled in an integrated and balanced manner fully taking into account the 'polluter pays' principle". 27/

55. Environmental problems that are becoming quite serious in many developing countries include such problems as pollution and the over-exploitation of natural resources, associated with intensification. Of particular importance to Africa is the growing loss of arable land owing to erosion and salination, the deforestation of the tropical rain forest, the over-exploitation of rangelands (particularly in semi-arid zones), the increasing cultivation and intensification of hillsides, the depletion of groundwater, and so on.

56. The major issues of concern to Africa revolve around resources, consistent policy instruments and the capacity for Africa to achieve sustainable development goals through the sound management of the natural environment. 28/ Hence the issues of poverty which frustrate both Africa's development efforts and the utilization of resources as well as environmental conservation have emerged as important issues. The issues of debt and resource flows also impinge on environmental protection and the conservation of natural resources.

B. Environment and sustainable development in Africa

57. The Sub-Saharan African economies are largely agrarian. The unsustainability of their agricultural sectors is most likely also to imply the unsustainability of their overall development path. So far there has been no systematic attempt made to establish the unsustainability of the economies in question and to relate the differences in country performances to their technological and employment policies and their overall development strategies. 29/

58. The International Labour Organisation (ILO), however, has studied a selection of 22 countries from 4 subregions in Africa, i.e. the arid and mediterranean North Africa, arid and semi-arid Sudano-Sahelian Africa (including Ethiopia and Kenya from East Africa), humid and sub-humid Central and West Africa, and sub-humid and semi-arid South-East Africa. The overall African performance was further compared with that of other broad regions such as the Far East, Latin America and developing countries in general, as well as a selected number of Asian countries (China, India, Indonesia, Malaysia and Thailand).

59. The ILO study found that while both per capita food and crop production in Africa declined by about 14 per cent between 1961 and 1990, the Far East as a whole registered 50 and 40 per cent increases in per capita food and crop production, respectively, during the same period. The figures for developing countries as a whole were 30 per cent and 23 per cent, respectively. With regard to individual country comparisons, with the exception of North African countries, the same glaring contrast emerges in the performance of almost all Sub-Saharan countries compared with the selected Asian countries in the sample. With the exception of Mali and Côte d'Ivoire, all the Sub-Saharan economies registered a decrease in per capita food and crop production, some by as much as 40 per cent.

60. The study revealed that, with the exception of North Africa, the adverse growth performance of African agriculture seems to be shared amongst all agro-ecological regions in Africa. As the agro-ecological conditions in the agricultural regions of North Africa are shared by the semi-arid and sub-humid regions of Sub-Saharan Africa, the better performance of the countries in the former region are more likely to be due to socio-economic rather than to natural resources. Thus, the ILO study did not conclude that poor performance of African agriculture was an indication of the intensity of environmental degradation. Referring to an earlier FAO study, the ILO document enumerates six main causes for the crisis in African agriculture, namely government policy, population growth, poor land development, lack of technological change, environmental degradation, and the conditions of the world economy. The FAO, however, has concluded that environmental degradation is having a serious impact on productivity (see para. 65 below). The World Bank found that "Soil degradation, in particular, is the cause of stagnating or declining yields in parts of many countries, especially on fragile lands from which the poorest farmers attempt to wrest a living". 30/

C. Causes of environmental degradation in Africa

61. Relationships between demography, poverty, and environmental degradation are complex, but in the case of the African countries they are especially clear. 31/ The population growth of the last century has not only forced people to rely on marginal lands, but has also led to exhaustion of the better lands due to soil mining, erosion and monocropping. Also, the majority of African peasantry have been deprived of fertile lands in the valleys and along rivers by both colonialists and the African plutocracy and forced to eke a living on marginal lands. As a result, both the area available for, and the production potential of, agriculture have diminished. Migration to other parts of the continent and the world is a common practice, which provides a substantial part of the income of many families in the countries of Sub-Saharan Africa.

62. The lack of an appropriate technology, stressing conservation of natural resources rather than primary production goals, plus existing economic constraints often mean that farmers are not able to cultivate in a sustainable manner. Short-term priorities - for example, food production, income generation, or economic benefits - conflict with long-term considerations of ecological and socio-economic sustainability. Technological and economic circumstances and constraints greatly determine the type of farming. Further, poverty and environmental degradation appear to be self-sustaining

phenomena: resource-poor farmers have limited access to technological options, to financing and other means of production. Those who are most severely affected usually have neither alternative employment opportunities nor the freedom to move elsewhere.

63. The challenges of poverty reduction and environmental protection are often seen as antithetical - at least in the short-term horizon within which most poor people are forced to live. 32/ As with virtually anything that diverts even incremental energies or resources of subsistence-level people, a pause to protect or repair the environment can literally take food out of the mouths of hungry families.

64. The conflict is both between what is good for the environment and what is good for the poor and also between what is good for the poor of today and the poor of tomorrow. In many marginal, rural areas growing numbers of poor people inevitably have to degrade the environment a little more each day just to make ends meet. But in doing so, they take not only from nature's bounty but also from the well-being of future land-dependent generations. Consequently, even when the short-term trade-off between immediate hunger and environment is stark, the urgency is growing for developing-country governments and international donors to promote appropriate policy instruments to reduce the conflicts. The then President of the World Bank in 1980 described the situation succinctly when he opined that the stubborn fact of the 1980s was that growth had been inadequate, poverty had continued on the rise, and the environment was poorly protected. He concluded that "unchanged, these realities would deny our children a peaceful, decent and livable world". 33/

65. According to the FAO it is population pressure and the resultant intensification of agriculture, often ill-suited to the agro-ecological endowments of a region, that are degrading and depleting the resource base. The problem is aggravated by lack of knowledge of the ecosystems, especially in the tropics and sub-tropics where the ecological balance is least stable. Over-exploitation of poor soils, deforestation of watersheds, damming of rivers, clearing of mangrove areas, and depletion of plant and animal genetic resources are some of the trends that endanger the productivity of natural resources for food and agriculture. 34/

(a) Population

66. Population factors, individually or collectively, are one of the principal acting agents, multiplying their use per capita and multiplying the kind of technology used that affects the environment for good or bad. In industrialized countries with fairly slow population growth but with considerable affluence, there are generally high rates of use or consumption per capita and the damage to the environment is caused primarily by the high consumption. In developing countries with rapidly growing populations, little affluence and considerable poverty, the use or consumption per capita is likely to be rather low and the magnitude of the damage to the environment will be primarily the product of population factors with inefficient use of resources and general lack of education. Under these circumstances, when ecological systems are pressed beyond their resiliency and capacity for recovery, they are destroyed in several ways.

67. Most African countries have come to experience many serious forms of environmental degradation, as the population grows dramatically, and more and more people seek incomes and subsistence from a declining resource base. The most acute environmental hazard in most African countries is soil erosion, and the consequent desertification whose increasing prevalence and geographical spread is seriously undermining the productive base of the continent's predominantly agricultural economy. Many of these problems emanate from institutional arrangements such as common access and lack of land rights.

(b) Poverty

68. Poverty itself is seen as a prime cause of environmental degradation, as it leads to over-cultivation in ecologically fragile areas, and causes acute deforestation. Sub-Saharan Africa leads the world in the annual destruction of forests and woodlands for firewood and for adding to the densely populated arable land. The destruction of forests in Uganda is typical of other countries in Sub-Saharan Africa: 35/

1900 ..... 31,000 square kilometres of trees

1930 ..... 23,000 remaining

1960 ..... 11,000 remaining

1985 ..... 6,000 remaining.

69. Poverty and environmental degradation are very closely interlinked. Indeed, poverty, in the context of Africa, is the major cause of environmental degradation. The scarcity of resources for the initiation, stimulation, promotion and sustenance of development activities is at the root of the underdevelopment and environmental degradation in the developing countries, particularly Africa. Poverty is the fundamental cause of environmental pressures and consequent massive environmental degradation both at the regional and global levels. It is a vicious cycle of global economic transactions which have sustained the inequality in development between the North and the South.

(c) Technology, agriculture and the environment

70. In the long term science and technology development is not only a necessary condition for raising productivity, creating new employment opportunities and increasing incomes; it is also an inevitable process. Technological change, however, should be guided by well-formulated and consistent policies closely linked with development policy, and be well adapted to environmental conditions. The latter aspect is of paramount importance for several reasons: Africa will remain a predominantly rural region for at least the next 20 years, and its most critical problems today are associated with food production and the rational use of the natural system.

71. For a long time, traditional agricultural policies have been largely based on the idea that increasing agricultural productivity is possible by accelerating diffusion of "modern" technologies developed in the North. With

this understanding, a top-down approach was adopted based on the unrealized expectation of the trickle-down effect theory. Technologies, originating in the temperate regions of the North, were oriented to the realization of economies of scale. But when transferred to African rural areas they tended to bypass the main producers: the small-scale farmers. Given the importance of small-scale producers in African agriculture and the fact that the vast majority of the African population is rural, while most cultivation is done by women, policies should be geared to stimulating those technologies that can best be used by small producers in order to increase productivity in small agricultural units.

72. Indiscriminate technology transfers have failed to make substantial impact in Africa's agricultural systems. The catalogue of such failures in African agriculture is appalling. 36/ As early as the 1940s, the British peanut scheme in Tanganyika was one of the most spectacular failures: 1.2 million hectares of land were allocated to a giant peanut scheme. The area did not get the needed amount of water. After 10 years, the area was eroded, turning, in the dry season, into a cement-hard desert. The cost of that project was £35 million. In this case, planners never considered the recurrent low rainfall and the low water-holding capacity of the soil. The Sefo Scheme in southern Senegal also ignored the environmental impact of large-scale mechanical clearing which resulted in high rates of soil erosion, crop loss and the eventual failure of the project.

73. Two typical recent examples can be given. First, is an example from the United Republic of Tanzania, the Hanag wheat project. It cost the Canadian and Tanzanian Governments more than US$ 80 million but provided jobs for only 250 Tanzanians and resulted in accelerated erosion because of heavy mechanization. And it displaced Barbaig pastoralists to poor areas that became rapidly overgrazed, thus deepening the environmental degradation. Second, from Sudan: the Gezira Scheme is yet another example of a development that went awry because it ignored environmental considerations. The Gezira was an intensive agricultural scheme which started with good results, creating high hopes only to be dashed afterwards. The scheme heavily depended, for long, on chemical fertilizers pesticides which resulted in increasing soil debility, chemical contamination and hazards to humans and animals. The Government of Sudan, like most African governments, was faced with the paradox of choosing between short-term gain, i.e. increasing production, and the long-term loss reflected in environmental collapse. But not only is that collapse no longer an eventuality, even the short-term gain has become a fallacy. With all those inputs tied to international market trends and foreign currency availability, cultivation schedules were seldom met and the project suffered accordingly.

(d) Other factors

74. Land use patterns prevalent in most African countries coupled with population pressure on land resources, lead to fragmentation of landholdings, shortening of fallow periods, and cultivation of erosion-prone hillsides, all of which contribute to soil degradation. To the extent that land fragmentation is not matched by the introduction of intensive and environmentally sustainable agricultural techniques, the farmers with exceedingly small plots are forced to "mine" their land or migrate or engage

in ecologically destructive practices of land extensification on marginal lands where soil and climatic conditions are poorly suited to annual cropping. Open access to land: forests, pastureland, or fishing grounds tends to lead to overuse of these resources.

75. Rural poor rely on fuelwood for energy resources, for most of their requirements. There is an urgent need for the identification of economically viable and environmentally sound energy sources; the formulation of energy policies integrating economic and environmental considerations; the promotion of the research, development, transfer and use of improved energy-efficient technologies, including new and renewable sources of energy; and the promotion of capacity-building as called for in Agenda 21.

D. Responses to Africa's environmental degradation 37/

76. The African environmental and development Agenda emphasizes that environmental management is not, and should not, be addressed as a sectoral issue. 38/ Managing the environment is an integral part of the development process, which in itself demands a multifaceted approach. Environmental action, as part and parcel of the national, regional and global social and economic developmental process, while catering for global concerns, must be inward-looking in the first place.

77. Africa's approach to environmental issues focuses on three broad issues: (a) the imperative of popular participation and full democratization at all levels of governance and the decision-making process relating to environmental management and development; (b) the economic empowerment of the region as a whole, of individual countries, especially women and grass-roots groups - this is required for dealing effectively with mass and growing poverty, rising global inequalities and human resources development; and, (c) the necessity for the effective coordination of environment and development programmes and policies at the subregional and regional levels.

78. From these basic orientations, Africa's priority concerns relating to environment and development are related to the following areas: (a) poverty; (b) food security; (c) energy security; (d) sustainability of economic growth and employment; (e) security and stability of financial resources; (f) improvement of quality of life and habitat; (g) weak analytical and managerial capacities in the area of environment and development.

Chapter IV

HUMAN RESOURCES DEVELOPMENT

A. Education and development over the past three decades

79. A great deal has been documented about the remarkable growth and development of African education over the last three decades. 39/ The expansion was necessitated by the fact that at the time of independence a large portion of the African population was illiterate and the few who were educated did not have all the required knowledge and skills needed for national development; and where they did, they were not in adequate numbers. The continent embarked on wholesale expansion of education at all levels of the education system.

80. Thus public expenditure on education increased by almost threefold between 1975 and 1990. The achievements in the sector have been impressive. Primary school enrolment ratio increased from 42.3 per cent in 1960 to 71.9 per cent in 1990 and the equivalent ratio for secondary schools from 5.1 to 27.5 per cent during the same period. The adult literacy rate increased from around 9 per cent in the early 1960s to about 40 per cent in the early 1980s. 40/

81. As can be observed from Table 2, primary education rose from a figure of 19.3 million pupils in 1960 to 68.5 million in 1982; whereas secondary education rose by fivefold from 1.9 million to 17.0 million during the same period. However, in comparison to other developing countries, total enrolment in formal education at all levels was lowest in Africa. 41/ Equally significant was the gross enrolment ratios by level of education between 1970 and 1990 were lowest in Africa. 42/ However, as UNESCO observed "over the last decades, among those regions whose first level enrolment ratios in 1970 were substantially below 100 per cent - Sub-Saharan Africa (70.8 per cent), Arab States (62.5 per cent), and Southern Asia (70.8 per cent) - the strongest regional effort in favour of the development of first level education, as measured by the share taken by first level education out of the total increase in enrolment at all levels, was made by Sub-Saharan Africa ...". 43/

Table 2

Enrolment (millions) of Education in Africa and percentages (1960, 1970 and 1982)

	1960		1970		1982	
	Numbers	Ratio	Numbers	Ratio	Numbers	Ratio
First Level	19.3	44%	33.4	57%	68.5	81%
Second Level	1.9	4%	5.4	11%	17.0	25%
Third Level	0.2	1%	0.5	2%	1.6	4%
All Levels	21.4	20%	39.2	34%	87.1	44%

Source: ECA - Trends and Issues in African Education - Education Monograph No. 10, 1992. p. 4.

82. Actually the push in favour of first level education in Sub-Saharan Africa occurred in the 1970s; it slowed down dramatically during the 1980s because of the deteriorating social and economic conditions, increased demographic pressures and lack of human and financial resources among others. Thus the total number of illiterates, people aged 15 years and over, was 115 million in 1970 and 138.8 million in 1990 and is expected to rise to over 146.8 million by the year 2000. These statistics have serious implications for the development strategies adopted by African countries as well as the development of education.

83. The high and persistent levels of illiteracy, particularly in African LDCs, pose a serious obstacle to the development efforts of these countries. It hampers economic growth, promotion of private enterprise, raising productivity and communication and the propagation of technical information, thus effectively impeding access to innovation and to the more efficient use of resources.

B. Factors constraining human resources development and utilization in Africa

84. According to ECA, the development and utilization of human resources in Africa are constrained by an interplay of several factors related to the socio-economic situation in the continent. These factors, though not exhaustive, are: (a) the high rate of population growth with implied high level of unemployment and under-employment; (b) the deficiencies of the existing educational systems, both in terms of the relevance of education in response to national development needs, and in the production of adequate numbers of skilled and trained manpower, and in alleviating the high level of adult illiteracy; and (c) the lack of coordinated policies and programmes of human resources development as well as the scarcity and misallocation of human and financial resources in several fields. 44/ The erosion of living standards and social welfare associated with civil strife, environmental degradation, growing open and disguised unemployment, declining real per capita incomes and the collapse in many parts of the region, of already inadequate and overburdened social and economic infrastructure. As government budgets are squeezed, public spending on social services such as education and health continue to suffer in real terms.

85. The youthfulness of the population in developing countries, particularly in Sub-Saharan Africa, has very serious implications for the development of human resources. In the first place, the task of education expansion is enormous; and second, there are proportionately few adults in the working population to shoulder the burden of educating the younger generation under the age of 15.

(a) Population growth, unemployment and underemployment

86. The rapid population growth has made it extremely difficult for African Governments to attain their development objectives. The problem of unemployment and underutilization of human resources has become a major challenge for African countries, not only in terms of creating new jobs for those who are presently unemployed, but more importantly in providing gainful employment for those reaching the working age in the course of the coming

decade. Open unemployment in Africa is estimated to have increased from 7.7 per cent in the late 1970s to 22.8 per cent by the early 1990s and is projected to reach 30 per cent by the year 2000. 45/ According to ILO, open and disguised unemployment increased by one-sixth in SSA during the 1980s. This was four times faster than in the 1970s. It is estimated that productive employment is increasing by about 2.4 per cent, while the labour force is increasing by about 3.2 per cent. The unprecedented high rates of migration of the rural population has further exacerbated the unemployment problem in urban centres. Underemployment increased throughout the 1980s and is estimated to affect about 90 million in Africa.

87. The growing number of the unemployed young persons (15-24 years old) is a cause of concern as the proportion of the young in relation to population will continue to increase during the coming three decades. Within this category young women tend to experience higher rates of unemployment.

(b) Expansion-induced dilution of education systems

88. Following independence, the main preoccupation of many African countries was the indigenization and localization of the civil services as well as the private sectors of the economy. This necessitated the quantitative expansion of education between 1960 and 1980 resulting in an increase of the gross enrolment ratios in the countries of Sub-Saharan Africa from 46.3 per cent in 1970 to 77.1 per cent in 1980 at the first level; and from 7.1 per cent in 1970 to 18.7 per cent in 1985 at the second level. The educational systems, however, continued to be modelled on pre-independence fashions by being primarily directed at white-collar employment. In spite of major efforts, and the devotion of resources to education, little effectual change was made to curricula to reorient it to national development needs and to vocational training so as to adapt education to job opportunities available and for enhancing the productivity of the labour force in all fields.

89. It was argued in the Least Developed Countries 1993-94 Report that the quantitative expansion in the education sector in several LDCs, including the majority of African LDCs, was often at the cost of quality. Three indicators, mainly the pupil-teacher ratio, expenditure on teaching materials and repetition and drop out rates were used to measure educational achievements and performance.

90. Over the last few decades, the gender factor has risen to prominence with the role of women in development activities. Of the total population of Africa of 642.6 million in 1990 46/ females constituted about half of this population. Of this population illiterate proportion of those aged 15 years and over was 138.8 million. Female adult literacy rate of those 15 years and over was only 36.1 per cent as opposed to male literacy rate of 59.0 per cent in the same year. 47/ This low level of literacy of the women folk is partly due to the fact that education system continues to give inadequate attention to female education as well as due to the social and economic conditions of the region.

(c) Government policies and lack of coordination

91. The problems of human resources development and utilization have been blamed on educational systems for ill-equipping the products of the system with either inadequate or irrelevant knowledge, skills and attitudes. Yet much of the fault and blame can be attributed to the government machineries, authorities, policies and practices for the development and utilization of human resources. First, many African countries lack a comprehensive and integrated approach to the planning and development of education at the three levels of an educational system. There is also the inadequate coordination of training systems (both formal and non-formal training systems) and their integration in overall human resources development programmes. There is also much neglect of non-formal approaches to the development of knowledge, skills and attitudes in preference to formal training approaches. Indeed lack of integration of human resources planning in overall national development planning has proved counter-productive in the effective development and utilization of manpower.

C. Major areas of human resources requirements

92. The human resources requirement in development process is measured in relation to the magnitude and type of tasks to be performed in both services and production. Human resources development denotes all actions taken to provide skills and knowledge to, and mature attitudes in members of a society so that they are better placed to contribute to improvements in the standards of living in society. Priority for human resources development would have to be given to development and training in respect of:

(i) natural resources exploration and exploitation as well as the development, preservation and utilization of the environment;

(ii) the development of Africa's agricultural potential focusing on food production, food preservation and processing;

(iii) industrialization and industrial development and exploitation of raw materials for industrial processes and products;

(iv) population and family planning issues provision of basic health care, encompassing basic curative as well as preventive services;

93. Discussion of specific requirements of knowledge, skills, attitudes and know-how in respect of each priority sector, sub-sector and development programmes go beyond the scope of this document. 48/

Chapter V

CONCLUSIONS

94. Not all aspects of the relevant issues on such a vast topic as sustainable development, population, human resources and environment have been touched upon here. Notable omissions include the potential adverse impact on African exports from strict application of environmental considerations by consumer countries. This report has sought to illustrate vividly the consequences of the failure on the part of African countries to slow down the high rate of population growth and put in place effective environmental protection measures. The emphasis is on demonstrating how environmental problems and population growth can and do undermine the goals of development.

95. The most immediate environmental problems facing African countries are: unsafe water, inadequate sanitation, soil depletion, indoor smoke from cooking fires and outdoor smoke from coal burning. These problems are different from - and more immediately life-threatening than - those associated with the affluence of developed countries, such as carbon dioxide emissions, depletion of stratospheric ozone, photochemical smogs, acid rain, and hazardous wastes. In devising responses to African environmental problems the following points made by the World Bank 49/ may be taken into account:

(1) African countries, like many other developing countries, need to have access to less-polluting energies and to learn from the successes and failures of industrial countries' environmental policies and behavioural patterns.

(2) The protection of tropical forests and biodiversity is beneficial to the rich countries and these countries should be invited to bear part of the costs.

(3) Some of the problems facing African countries and other developing countries - global warming and ozone depletion, in particular - stem from high consumption levels in rich countries; thus, the burden of finding and implementing solutions should be on the rich countries.

(4) The strong and growing evidence of the links between poverty reduction and environmental goals makes a compelling case for greater support for programmes to reduce poverty and population growth.

(5) The capacity of developing countries to enjoy sustained income growth will depend on industrial countries' economic policies; improved access to trade and capital markets, policies to increase savings and lower world interest rates, and policies that promote robust, environmentally responsible growth in industrial countries, will all help.

96. Two types of policies are required: those that build on the positive links between development and the environment, and those that break the negative links. Building on the positive links will involve clarifying rights to manage and own land, forests, and fisheries; accelerating provision of sanitation and clean water; education (especially for girls); family planning

services, and agricultural extension, credit, and research; taking measures to empower, educate, and involve farmers, local communities, indigenous people, and women so that they can make decisions and investments in their own long-term interests. The other type of policies are those that involve strong policies and institutions targeted at specific environmental problems. The general point here is that these policies are most effective when they aim at underlying causes rather than symptoms, concentrate on addressing those problems for which the benefits of reform are greatest, and use incentives rather than regulations where possible. Policies need to work with the grain of the market rather than against it. In addition, specific comments are made concerning the areas identified below.

A. Agriculture

97. There is a need to create farmer demand for "environmentally sustainable" agricultural technology through: expanding appropriate research and extension to farmers, eliminating open-access land tenure systems, and establishing agricultural policies that make agricultural intensification profitable and reduce the relative profitability of shifting cultivation. Efforts should ensure that agricultural services and education serve women by reducing the demand for children and improving women's farming practices. It is argued that such measures are likely to succeed if they create an enabling environment rather than merely seek to control the damage without changing the economic conditions of the poor. The issue of open access and need to clarify property rights is particularly important in Africa. Examples elsewhere show that appropriate policies can work. Providing land titles to farmers in Thailand has helped to reduce damage to forests. The assignment of property titles to slum dwellers in Bandung, Indonesia, has tripled household investment in sanitation facilities. Providing security of tenure to hill farmers in Kenya has reduced soil erosion. Formalizing community rights to land in Burkina Faso is sharply improving land management.

B. Population

98. Low levels of socio-economic development have combined with cultural, religious and political inhibitions about population issues and a limited institutional capability to deal with such issues to produce the highest fertility and mortality rates in the world. There has been a gap between awareness of the need for a comprehensive population policy and its actual implementation. Among the reported problem areas are lack of reliable data, insufficient research, lack of trained personnel and inadequate awareness among planners of the importance of integrating population factors in development plans. Each nation should establish long-term population objectives and programmes to achieve them. It has been suggested that Sub-Saharan Africa should seek to increase contraceptive prevalence rates from the current 10 per cent to 45 per cent in the year 2000. Recent data from surveys in a number of Sub-Saharan countries indicate considerable latent demand for family-planning services. Availability of high quality services in line with client preferences has been shown to be successful in increasing contraception prevalence rates. It is believed that with the provision of services, total fertility rates can go down from the current level of 6 to 7 children per woman to about 3 to 4, but achieving a further decrease will require intensive demand-generation efforts. A successful demand-generation

effort will require that African communities assess their own economic and social problems, and then link these problems with family sizes and the solutions they wish to adopt. Africa will need assistance to strengthen the capacity of countries to undertake and manage population programmes and policies and to integrate them into overall economic and social development programmes.

C. Environment

99. African countries are encouraged to prepare and implement National Environmental Action Plans (NEAPs), and in this context to focus particular attention on linkages with agricultural and population issues, including the institutional arrangements and community participation that will make these linkages effective; and also to reduce forest and wildlands degradation through the implementation of land use plans and agricultural intensification.

D. General requirements

100. For sustainable development to occur, there must be a fundamental reorientation of government policies and resources towards solving rural problems. Land reform, credit, improved extension, greater government accountability, and people's participation are important prerequisites if poor farmers are to succeed. Further, policy reform in Sub-Saharan Africa needs to be backed by improved measures to compensate for shortfalls in commodity export earnings caused by factors outside their control. Finally, significant debt write-offs by bilateral and multilateral agencies are a sine qua non if Sub-Saharan Africa is to resume a steady path of development.

E. The international community

101. The international community should continue to increase its assistance to African countries in the fields of population and development, technology development and transfer, long-term perspective development planning, including that related to refugees and returnees, training and research. There is a need to strengthen and expand support to all types and levels of training and to strengthen the institution-building capacity of African countries. Other measures that African countries have urged the international community to consider include the conversion of African debt into grants to be used in financing social programmes including population activities; and strengthening of South-South cooperation with regard to training, exchange of information, sharing of experiences, know-how, and technical expertise.

Notes

1/ See Report of the International Conference on Population, 1984, Mexico City, 6-14 August 1984 (United Nations publications, Sales No. E. 84 XIII.8).

2/ Our Common Future. The Report of the World Commission on Environment and Development (Oxford and New York, Oxford University Press, 1987).

3/ See Report of the International Forum on Population in the Twenty-first Century, Amsterdam, the Netherlands, 6-9 November 1989 (New York, UNFPA, 1990).

4/ The Challenge to the South: The Report of the South Commission (New York, Oxford University Press, 1990).

5/ Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-4 June 1992.

6/ Final Act of UNCTAD VII, paragraph 21.

7/ Final Act of UNCTAD VII, ibid.

8/ Our Common Future, op. cit., paragraph 2.

9/ Environmental Perspective to the Year 2000 and Beyond.

10/ Since the 1972 United Nations World Conference on the Environment in Stockholm, most developing countries have made it clear that, in the ranking of objectives, development was given greater priority than the environment. Slowing economic growth in the interests of protecting the environment might appear to be a worthy cause to the richer countries but was certainly not high on the agenda of the developing countries.

11/ W. Berckerman: "Economic Growth and the Environment: Whose Growth? Whose Environment?", World Development 1992: Linking Environment to Development: Problems and possibilities.

12/ World Bank: Les Problèmes de l'Environment en Algérie, August 1989, Quoted by Beckerman, ibid.

13/ The United Nations New Agenda for the Development of Africa in the 1990s, Annex, paragraph 18.

14/ International Conference on Population and Development, Cairo, Egypt, 5-13 September 1994.

15/ International Conference on Population and Development, Cairo, Egypt, 5-13 September 1994.

16/ Experiences concerning population and development strategies and programmes: Fourth Review and Appraisal of the World Population Plan of Action, A/CONF.171/4, p. 10, prepared for the Cairo International Conference on Population and Development.

17/ ECA: Human Development Agenda for Africa in the 1990s: A Programme for the Implementation of the Regional Framework for Human Resources Development and Utilization in Africa; ECA, Addis Ababa, 1993, (E/ECA/CM.19[9]).

18/ There is a view that in the case of countries with low population densities such as the majority of African countries, population growth and increased densities can stimulate intensification of agriculture by inducing technological change made possible by changes in relative factor proportions as well as by the development of factor and product markets, specialization and development of property rights, all in turn leading to greater investment in land. There is no evidence whatsoever that such an outcome is likely in African countries.

19/ UNDP, Human Development Report, 1994.

20/ UNDP, Choices, The Human Development Magazine, September 1994.

21/ FAO, Agriculture: towards 2010, C93/24.

22/ World Bank, Education in Sub-Saharan Africa.

23/ WHO, Health, Population and Development, WHO/EHE/94.

24/ Organization of African Unity, Council of Ministers, Sixtieth Ordinary Session, 6-11 June 1994, Tunis, Tunisia: resolution on the Activities of the OAU General Secretariat in the field of population and development policy in Africa.

25/ World Economic and Social Survey.

26/ The Least Developed Countries 1992 Report, TD/B/39(2)/10.

27/ UN-UNADAF, p. 17.

28/ See: Africa's Preparations for the United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 1-12 June 1992, E/ECA/CM.18/13.

29/ International Labour Office, Environment, employment and development, ed, by A.S. Bhalla, International Labour Office, Geneva.

30/ World Bank, World Development Report 1992, p. 6.

31/ See for instance: Environment: The Development Strategies for a Common Agenda, H. Jeffrey Leonard et al; U.S. Third World Policy Perspectives, ib. 11; Overseas Development Council.

32/ For a detailed discussion on poverty and development see: Sustainable Development in Semi-Arid Sub-Saharan Africa, Poverty and Development, Analysis and Policy: No. 4.

33/ Barber Conable, "Address to the Board of Governors", Washington, D.C.: The World Bank, September 1980.

34/ FAO and the Environment, Food and Agriculture Organization of the United Nations, Rome, 1986, p. (vii).

35/ A Global Population Policy to Advance Human Development in the 21st Century: Sub-Saharan Africa, May 1992, The Futures Group.

36/ The examples given here come from: Mansour Khalid: The Scientific and Technological Perspective for the recovery and sustainable development of Africa, with particular emphasis on environmental aspects: Paper delivered at the International Conference on AFRICA: The Challenge of Economic Recovery and Development, Abuja, Nigeria, ECA/CERAD/87/25.

37/ See for example, ECA, Implementation of the African Strategies for the Implementation of Agenda 21 and the African Common Position: Progress Report, ECOSOC, E/ECA/CM.116.

38/ See: ECA, Implementation of the African Strategies for the Implementation of Agenda 21, ECOSOC, E/ECA/CM.20/16, Annex, p. 3.

39/ See for example, ECA - Human Development Agenda for Africa in the 1990s: A Programme for the Implementation of the Regional Framework for Human Resources Development and Utilization in Africa; ECA, Addis Ababa, 1993 [E/ECA/CM.19/9].

40/ ECA, Economic Report on Africa, 1990, E/ECA/CM.1613.

41/ ECA - Trends and Issues in African Education - Education Monograph No. 10, 1992.

42/ UNESCO: UNESCO World Education Report 1991, Table R4.

43/ ECA - Trends and Issues in African Education, op. cit., p. 6.

44/ ECA - A Regional Framework for Human Resources Development and Utilization in Africa, 1991.

45/ ILO/African Employment Report 1992, E/ECA/PHSDMFC/93.

46/ United Nations - World Population Prospects: The 1992 Revision, New York, 1992, Table A-Z.

47/ UNESCO - World Education Report 1991, op. cit., Tables R7 and R8.

48/ For full details see: (i) ECA resolution No. 332 (XIV), Development Strategy for Africa for the Third Development Decade [E/1979/50,E/CN.14/725]; (ii) The Monrovia Strategy of the OAU Heads of State and Government, Monrovia 1979; (iii) The Lagos Plan of Action and Final Act of Lagos, Lagos, April 1980; (iv) Africa's Priority Programme for Economic Recovery 1986-1990 (APPER); (v) United Nations Programme of Action for African Economic Recovery and Development 1986-1990 (UN-PAAERD); (vi) The Abuja Statement, The International Conference on Africa: The Challenge of Economic Recovery and Accelerated Development, Abuja, 1987; (vii) ECA, Khartoum Declaration on the Human Dimension of Africa's Economic Recovery and Development, Khartoum 1988; (viii) African Alternative Framework to Structural Adjustment Programmes for Socio-Economic Recovery and Transformation, 1989; (ix) ECA, Africa Charter for Popular Participation in Development and Transformation, Arusha 1990; (x) A Regional Framework for Human Resources Development and Utilization in Africa, 1991.

49/ World Bank, World Development Report 1992.